Table D-G-1 Greenhouse Gases (GHG) RBLC Search - Circuit Breakers Invenergy, LLC - Allegheny County Energy Center Project

| RBLCID | FACILITY NAME | PERMIT ISSUANCE DATE | PROCESS NAME | PRIMARY FUEL | THROUGHPUT | THROUGHPUT UNIT | PROCESS NOTES | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | UNIT | AVG TIME CONDITION | EMISSION LIMIT 2 | UNIT | AVG TIME CONDITION | STANDARAD EMISSION LIMIT | UNIT | AVG TIME CONDITION |
|------------|---------------------------------------|-------------------------|---|---------------|------------|-------------------|--|---|---------------------|--------------------|-----------------------|---------------------|----------|-----------------------|-----------------------------|------|-----------------------|
| KBLCID | | | MANE | TRISIART FUEL | mkocdirei | IIIKOCOIII CI CMI | TROCESS NOTES | Leak prevention. Must have manufacturer-guaranteed leak rate no more | LIMIT | | COMDITION | LIMIT 2 | CMI | CONDITION | EMISSION LIMIT | CMI | COMMINION |
| FL-0356 | OKEECHOBEE CLEAN ENERGY CENTER | 03/09/2016 ACT | Circuit breakers | | 0 | | Approximately 17 circuit breakers. | than 0.5% per year. Must be equipped with leakage detection systems and alarms. | 0.5 | % LEAK PER YEAR | | | | | | | 1 |
| *FL-0363 | DANIA BEACH ENERGY CENTER | 12/04/2017 :ACT | Circuit breakers (two) | | 0 | | Sulfur hexafluoride (SF6) circuit breakers, leak rate no more than 0.5% per year | Certified leak rate < 0.5% per year | 0.5 | % LEAK PER YEAR | | | | | | | |
| -FL-0363 | CENTER | ænosp;AC1 | (two) | | 0 | | 1 / | Certified seak rate < 0.5% per year | 0.5 | PER TEAR | | | | | | | |
| | | | | | | | (8) sulfur hexafluoride insulated circuit breakers and are to be state-of-the- art sealed enclosed-pressure circuit breakers equipped with leak detection | | | | | | | | | | 1 |
| | CPV FAIRVIEW | 09/02/2016 | | | | | equipment that: 1) alerts the operator when 10% of the SF6 by weight has escaped for any breaker and 2) alerts the operator when a leak exceeds | State-of-the-art sealed enclosed-pressure circuit breakers with leak | | | | | | | | | 1 |
| *PA-0310 | ENERGY CENTER | ACT | Circuit breakers | | 0 | | 5000 ppm from any breaker. | detection | 1500 | PPM | | | | | | | |
| | | | Sulfur hexafluoride | | | | | | | | | | | | | | 1 |
| | JACKSON COUNTY | 06/30/2017 | (SF6) insulated Electrical | | | | | The use of circuit breakers with totally enclosed insulation systems | | | | | | | | | 1 |
| TX-0824 | GENERATING FACILITY | ACT | Equipment | | 0 | | The facility will consist of Four SF6 insulated circuit breakers. | equipped with a low pressure alarm and low pressure lockout is BACT | 34.4 | T/YR | | | | | | | - |
| TX-0824 | JACKSON COUNTY GENERATING FACILITY | 06/30/2017 | Natural Gas | | | | | weekly checks for leaks using audio, visual, and olfactory (AVO) sensing | 693.3 | T/YR | | | | | | | 1 |
| | | 04/26/2018 | Fugitives | | 0 | | Quantity 6 | for natural gas leaks Enclosed-pressure design with low-pressure detection system (with | 693.3 | I/YR | | | | | | | |
| *VA-0328 | C4GT, LLC | ACT | Circuit Breakers - 6 Equipment Leaks | | 0.5 | % | Annual leakage rate | alarm). | 0 | | | | | | | | |
| *VA-0328 | C4GT, LLC | 04/26/2018 ACT | from Natural Gas Components | | | | Work practice requirements | Best management practices to prevent, detect and repair leaks of natural | | | | | | | | | 1 |
| - VA-0328 | C4G1, LLC | ænosp;AC1 | ENCLOSED | | 0 | | Work practice requirements | gas from the piping components. | 0 | | | | | | | | |
| | PALMDALE HYBRID | | PRESSURE SF6 CIRCUIT | | | | 0.5% BY WT ANNUAL LEAKAGE RATE | | | | 12-MONTH ROLLING | | | | | | 1 |
| CA-1212 | POWER PROJECT | 10/18/2011 | BREAKERS | | 0 | | 10% BY WI ANNUAL LEAKAGE RATE 10% BY WT LEAK DETECTION SYSTEM | | 9.56 | T/YR | TOTAL | 0 | | | 0 | | 1 |
| | | | | | | | | DOTALL OPENITE AND MAINTAIN FROM | | | TONG BED | | | | | | |
| | PIO PICO ENERGY | | CIRCUIT | | | | | INSTALL, OPERATE, AND MAINTAIN ENCLOSED- PRESSURE SF6 CIRCUIT BREAKERS WITH A MAXIMUM | | | TONS PER CALENDAR | | | | | | 1 |
| CA-1223 | CENTER | 11/19/2012 | BREAKERS | | 0 | | 3 switchyard and 2 generator breakers containing SF6. | ANNUAL LEAKAGE RATE OF 0.5% BY WEIGHT | 40.2 | T/YR | YEAR | 0 | | | 0 | | |
| | MARSHALLTOWN GENERATING | | | | | | | | | PERCENT | CALENDAR | | | | | | 1 |
| *IA-0107 | STATION | 4/14/2014 | circuit breakers | | 0 | | SF6 losses from circuit breakers | | 0.5 | LOSS | YEAR | 0 | | | 0 | | <u> </u> |
| | | | ELECTRICAL | | | | | ALTERNATIVE TECHNOLOGY | | | 12 CONSECUTIVE | | % DESIGN | | | | 1 |
| | ST. JOSEPH ENEGRY | | CIRCUIT | | | | THE SIX (6) BREAKER, IDENTIFIED AS EMISSIONS UNIT | FULLY ENCLOSED CIRCUIT BREAKERS WITH LEAK | | | MONTH | | LEAK | | | | 1 |
| *IN-0158 | CENTER, LLC | 12/3/2012 | BREAKERS | | 0 | | SF6, CONTAIN SULFUR HEXAFLUORIDE (SF6) CONTAINING SULFUR HEXAFLUORIDE (SF6) | DETECTION | 0.0009 | TONS | PERIOD | 0.5 | RATE | | 0 | | |
| | | | ELECTRIC | | | | IDENTIFIED AS EMISSIONS UNIT FUG-SF6, PERMITTED | USE OF FULLY ENCLOSED PRESSURIZED SF6 CIRCUIT | | | | | | | | | 1 |
| *IN-0166 | INDIANA GASIFICATION, LLC | 6/27/2012 | CIRCUIT BREAKER | | 0 | | IN 2012, WITH FUGITIVE GHG EMISSIONS CONTROLLED BY FULL ENCLOSURE. | BREAKERS WITH LEAK DETECTION (LOW PRESSURE ALARM) | 0 | | | 0 | | | 0 | | 1 |
| 111 0100 | O.Dirication, Elec | 02772072 | DICERCENC | | | | DITOLE ENCLOSINE. | The best of | | | | | | | 0 | | |
| | | | | | | | | | | | | | | | | | 1 |
| | | | | | | | GHG BACT FOR THE CIRCUIT BREAKERS SHALL BE INSTALLATION OF STATE-OF-THE-ART CIRCUIT | | | | | | | | | | 1 |
| | | | | | | | BREAKERS THAT ARE DESIGNED TO MEET ANSI C37.013 | | | | | | | | | | 1 |
| | | | | | | | OR EQUIVALENT TO DETECT AND MINIMIZE SF6 LEAKS. LEAKS DETECTED SHALL BE REPAIRED WITHIN | | | | | | | | | | 1 |
| | | | CIRCUIT | | | | FIVE DAYS OF DISCOVERY; REPAIRS DOCUMENTED, | | _ | | | _ | | | _ | | 1 |
| *MD-0041 | CPV ST. CHARLES | 4/23/2014 | BREAKERS | | 0 | | AND ASSOCIATED REPAIR RECORDS MAINTAINED | | 0 | | | 0 | | | 0 | | |
| | WILDCAT POINT | | | | | | | INSTALLATION OF STATE-OF-THE-ART CIRCUIT | | | | | | | | | 1 |
| *MD-0042 | GENERATION FACILITY | 4/8/2014 | CIRCUIT BREAKERS | | 0 | | | BREAKERS THAT ARE DESIGNED TO MEET ANSI C37.013 OR EQUIVALENT TO DETECT AND MINIMIZE SF6 LEAKS | 0 | | | 0 | | | 0 | | 1 |
| | | | | | | | | GUG DI GT FOR THE GIRGUIT DRE LYTING G | | | | | | | | | |
| | WILDCAT POINT | | | | | | | GHG BACT FOR THE CIRCUIT BREAKERS SHALL BE INSTALLATION OF STATE-OF-THE-ART CIRCUIT | | | | | | | | | 1 |
| *MD-0042 | GENERATION FACILITY | 4/8/2014 | CIRCUIT BREAKERS | | | | | BREAKERS THAT ARE DESIGNED TO MEET ANSI C37.013 OR EQUIVALENT TO DETECT AND MINIMIZE SF6 LEAKS | | | | | | | | | 1 |
| · NID-0042 | FACILITY | 4/6/2014 | DREAKERS | | U | | | OK EQUIVALENT TO DETECT AND MINIMIZE SEG LEAKS | U | | | U | | | U | | |
| | | | SF6 Insulated | | | | | | | | 365-DAY | | | | | | 1 |
| | THOMAS C. FERGUSON POWER | | Electric Equipment_SF6- | | | | Fugitive emissions, SF6, from insulated electric equipment(circuit | | | | ROLLING AVERAGE | | | | | | 1 |
| TX-0612 | PLANT | 11/10/2011 | FUG | | 0 | | breakers) | | 131 | T/YR | (USE AS CO2E) | 0.006 | LB/H | 1 | 0 | | |
| | DEER PARK ENERGY | | | | | | SF6 Insulated Electrical Equipment (i.e., circuit breakers) consisting of one new 72 lb SF6 insulated generator circuit | | | | | | | | | | İ |
| TX-0632 | CENTER LLC | 11/29/2012 | SF6-FUG | | 0 | | breaker. | | 0.0002 | T/YR | | 0 | | | 0 | | |
| | CHANNEL ENERGY | | | | | | Because the emissions from this unit are calculated to be over | | | | 365-DAY | | | | | | 1 |
| T21 0 (22 | ENERGY CENTER, | 11.00.0010 | ore rue | | | | 99.9% carbon dioxide (CO2), the remaining | | 0.0002 | T/VR | ROLLING | | | | | | 1 |
| TX-0633 | LLC | 11/29/2012 | SF6-FUG | Natural Gas | U | | pollutant emissions (CH4 and N2O) are not presented in the table. | | 0.0002 | 1/YR | AVERAGE | U | | | U | | |
| | FGE POWER, FGE | | SF6 Fugitive | | | | | | | | | | | | | | ĺ |
| *TX-0748 | TEXAS PROJECT | 4/28/2014 | Emission Sources | | 0 | | | | 0 | 1 | | 0 | | | 0 | | |
| | GOLDEN SPREAD | | Fugitive | | | | The circuit breakers associated with the proposed units will be | | | | | | | | | | 1 |
| | ELECTRIC COOPERATIVE. | | Emissions from SF6 Circuit | | | | insulated with SF6. The capacity of the circuit breakers associated with the proposed plant expansion is currently estimated to 2920 | | | | WORK | | | | | | 1 |
| *TX-0749 | ANTELOPE STATION | C/2/2014 | Breakers | | lo. | l . | lbs SF6 | 1 | 0 | 1 | PRACTICE | 0 | 1 | 1 | lo. | | 1 |

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|----------|-------------------|-------------------------|---------------------------------|--------------|------------|-----------------|--|------------------------------------|---------------------|------|-----------------------|---------------------|--|-----------------------------|---|-----------------------|
| | | | | | | | | | | | | | | | | |
| | GOLDEN SPREAD | | Fugitive | | | | The circuit breakers associated with the proposed units will be | | | | | | | | | j / |
| | ELECTRIC | | Emissions from | | | | insulated with SF6. The capacity of the circuit breakers associated | | | | | | | | | j / |
| | COOPERATIVE, | | SF6 Circuit | | | | with the proposed plant expansion is currently estimated to 2920 | | | | WORK | | | | | i l |
| *TX-0749 | ANTELOPE STATION | 6/2/2014 | Breakers | | 0 | | lbs SF6. | | 0 | | PRACTICE | 0 | | 0 | | |
| | | | | | | | | | | | | | | | | j / |
| | | | | | | | The circuit breakers associated with the proposed units will be | | | | | | | | | i l |
| | GUADALUPE | | Fugitive SF6 | | | | insulated with SF6. The capacity of the circuit breakers associated | | | | | | | | | j / |
| | GENERATING | | Circuit Breaker | | | | with the proposed plant expansion is currently estimated to be two | | | | | | | | | i l |
| *TX-0753 | STATION | 12/2/2014 | Emissions | | 0 | | (2) breakers of 690 lb SF6 each. | | 0 | | | 0 | | 0 | | |
| | | | | | | | | | | | | | | | | j / |
| | | | | | | | The circuit breakers associated with the proposed units will be | | | | | | | | | i l |
| | | | | | | | insulated with SF6. The capacity of the circuit breakers associated | | | | | | | | | i l |
| | INDECK WHARTON | | Fugitive SF6 Circuit Breaker | | | | with the proposed plant expansion is currently estimated to be | | | | | | | | | j / |
| *TX-0757 | | 5/12/2014 | Emissions | | 0 | | three (3) breakers with 24.2 lbs SF6 each, and eleven (11) HV power circuit breakers with 550 lbs SF6 each. | | 0 | | | 0 | | | | i l |
| 1X-0/3/ | ENERGY CENTER | 3/12/2014 | Fugitive SF6 | | U | | power circuit breakers with 550 lbs SF6 each. | | U | | | U | | U | | |
| 1 | ECTOR COUNTY | | Circuit Breaker | | | | | | | | | | | | | , <i>!</i> |
| *TX-0758 | | 8/1/2014 | Emissions | | 0 | | | | 0 | | | 0 | | 0 | | (/ / |
| | GATEWAY | | | | | | | | - | | | | | | | |
| | COGENERATION 1, | | ELECTRIC | | | | | | | | | | | | | j / |
| 1 | LLC - SMART WATER | | CIRCUIT | | | | | | | | | | | | | , <i>!</i> |
| VA-0319 | PROJECT | 8/27/2012 | BREAKERS, (4) | | 60 | LB/SF6 | Enclosed pressure circuit breaker. | Enclosed pressure circuit breaker. | 28.6 | T/YR | 12 MO AVG | 0 | | 0 | 1 | i l |